

Creating a mobile app to teach ethical social media practices

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Creating a mobile app to teach ethical social media practices

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Abstract

Social media has transformed the way individuals and communities interact. The number of mobile devices connected to social media networks has increased exponentially over the last few years. These devices tend never to leave the sides of their owners and offer potentially limitless flexible opportunities for communication and learning. This paper initially outlines how an individual social work academic created a mobile phone and tablet app to help students explore the ethical uses of social media in social work. One aim is to encourage discussion around the theoretical and technical challenges posed when seeking to ensure an educational mobile app is grounded in social work as opposed to ICT principles of learning. Students' experiences of using the app in Australia, Canada and the UK are then analysed. The evaluation suggests that the scenario-based principles underpinning the design and engaging in learning on the mobile platform had both positive and negative impacts on student learning. The paper explores the lessons learned from these processes.

Keywords: Ethical Practice, Learning Design, Social Media, Professional Practice, E-Learning, Mobile Learning, Technology Enhanced Learning, Blended Learning

Introduction

The use of smartphones around the world is developing at a rapid rate. In 2013 there were almost as many mobile subscriptions as people on the planet (ITU, 2014).

Mobile devices connected to the Internet offer a number of possibilities to extend learning beyond the standard classroom format (Chen, Seow, So, Toh, & Looi, 2010; Ryan & Healy, 2007). Wang and Shen (2012) argue that to utilise these platforms

educators need to create, test and share lessons about the effective design and development of learning materials and activities.

The lead author was awarded a Teaching Fellowship in 2012 by his institution to explore what lessons could be learned by an individual academic, creating an educational mobile phone and tablet app. Over a 12-month period a £5,000 award was used to create and publish the Social Work Social Media app (SWSMa) (Cooner, 2013). Lessons about the process are shared here because although at present the creation of an app by a single social work academic may seem an unusual occurrence, in the near future it should come as no surprise to see an exponential growth in the number of students who enter the social work profession with coding experiences and skills. In the UK for example, as part of the National Curriculum, children as young as five are taught to code and program software and evaluate their application in real-world situations (Gove, 2014). This article explores a legitimate topic for research because as a number of writers in recent years have found, Information and Communication Technologies (ICTs) and social work have had a turbulent history (Sapey, 1997; Waldman & Rafferty, 2008). Hill and Shaw (2011) argue that this troubled relationship has resulted primarily because technological changes have in the main been imposed by technology-led methodologies. Therefore, one of the purposes of this article is to explore how learning theory and technology can be combined to create digital learning artifacts that have at their core the principles of social work, thus ensuring they are not reduced to the mechanised and standardised processes that can conform to the aims of ICT developers (White, Hall, & Peckover, 2009).

To assess the effectiveness of the SWSMa an evaluation of responses to the app from students in Australia (n=57), Canada (n=27) and the UK (n=32) enabled an insight from three different international perspectives. Students' experiences of learning on a mobile platform, confidence about using social media ethically and professionally and engaging in a principles based approach (Clark, 2013) utilising games theory, are explored. Although benefits are identified in using a mobile platform, there were also some drawbacks. This article seeks to outline some of the lessons learnt from these experiences. The article begins by providing the rationale for the app's subject selection, learning theory and design, and technical development process before exploring lessons from students' experiences of engaging with the app.

Subject selection

Social Work and Social Media

O'Connor, Cecil, and Boudioni (2009) argue that one of the main goals of social work education is to prepare students for practice. Teaching students how to ethically use social media for professional development and for the benefit of service users is currently one of the challenges facing social work education (Westwood, 2014).

Baker, Warburton, Hodgkin, and Pascal (2014) and Smith (2013) argue that developing awareness, knowledge and skills in this digital arena is important because in networked societies technology and power are closely connected, and therefore it is increasingly important for social workers to become aware of and develop the skills to use these social networks for the benefit of their service users. The introduction of social media policies by the British (BASW, 2012) Australian (AASW, 2013) and the Canadian Association of Social Workers (CASW, 2014) illustrate that the profession is becoming aware that to promote social change, justice and enhance well being and

human rights, the existence and power of social networks cannot be ignored. Whilst there has been a historical caution in using ICTs in social work education (Waldman & Rafferty, 2008) there is evidence that social work educators are using a variety of methods to teach about social media. Fang, Mishna, Zhang, Van Wert, and Bogo (2014) employ a relatively 'traditional' method of a presentation to students during a two-day mandatory orientation programme. In this presentation educators illustrate the benefits and challenges of using social media by using real-life scenarios. The presentation covers ethics, confidentiality, personal and professional boundaries and issues related to professional online conduct. Not unsurprisingly, because the students can relate the teaching to their personal use of social media, they have evaluated this learning highly. Taylor (2014) uses Twitter as part of a social work book club to help students develop their confidence and competence in using social media safely whilst enabling exploration of how the medium can be used to develop broader professional networks within a community of enquiry (Garrison & Vaughan, 2008). Cooner (2014), employing closed groups, has used Facebook as a 'site for learning'. Using a problem-based case study as part of an enquiry-based blended learning design, students' confidence in being able to outline the ethical issues, personal and privacy concerns for professionals and service users, and the potential positive and negative aspects of using social networking sites for future professional development, increased as a result of engaging 'on site' with this learning.

Whilst these examples illustrate good practice, Dorlee (2011) describes how as a student, her qualifying programme had an official policy of discouraging the use of social media. This meant that these students' opportunities to explore the creative, safe and ethical uses of this medium in their future practice were limited. Fang et al.

(2014) conducted a survey of student handbooks and guidelines of 575 North American social work programmes accredited by the Canadian Association for Social Work Education and the Council on Social Work in the United States. Of these programmes 394 had posted their student handbooks and guidelines online. They found that only 38 (9.64%) had guidelines addressing the use of social media. On the basis of these findings they conclude that the majority of educational institutions have not yet adopted procedures for the dramatically growing number of social media users and the associated increases of students' and practitioners' unprofessional or unethical online behaviours (for example, Ayers, 2011; BBC, 2013; McGregor, 2011).

Creating an app that could help educators, students and practitioners explore this topic in greater detail appeared to make sense given the apparent dearth of teaching about social media in social work programmes. Therefore the SWSMa sought to provide learners with opportunities to explore the following questions:

- Should social workers be mindful of their online image?
- Is developing social media skills important for social workers?
- What are the ethical implications of exploring open social media profiles?
- Does social media present new personal/professional boundary issues?
- How can social workers effectively engage in continuing professional development when using social media?
- Can skills, knowledge and confidence in social media use lead to greater service user/community/inter-professional engagement?

Learning theory and design

Theoretical foundations

Ballantyne and Knowles (2007) and Cooner (2010) suggest that learners should be exposed to scenarios they are likely to face in practice. Whilst documents such as the British (BASW, 2012), Australian (AASW, 2013) and Canadian (CASW, 2014) Social Media Policies can provide guidance, it is argued that effective learning will only take place when this advice is put into practice. To achieve this goal in the app it was important from the outset to be explicit about the theoretical foundations governing its design (Dyke, Conole, Ravenscroft, & de Freitas, 2007).

Mayes and De Freitas (2007) list three broad perspectives that encompass learning theories when using learning technologies. The first is Associationist; here students are expected to access a sequence of activities where they complete simple learning tasks as prerequisites to more complex ones. This approach works on the assumption that knowledge and skills need to be taught bottom up. At the time of development and writing there were very few social work education apps, and those that did exist tended to be primarily text-based and adopted an Associationist ‘information transmission and quiz’ approach, see for example the Guide to Social Work (Gentle-Gennity, 2011). The SWSMa sought to move away from this ‘technology-led approach’ (Hill & Shaw, 2011) to one that triggered curiosity, personal reflection and discussion and debate. To do this the learning design at different points overlapped with the other two perspectives, Cognitive and Situational as outlined by Mayes and De Freitas (2007). The Cognitive approach is based on Piaget’s (1970) constructivist theory of knowledge. Here learners must construct learning through active personal experimentation, observation and reflection rather than simply absorbing ideas from

the external world. The Situational approach highlights the importance of enabling learners to experience authentic learning activities allowing them to make links between the relationship of the learning task and its characteristics to real life situations. By adopting these goals as the foundations for the development of the app, the design aimed to acknowledge that every student brought their own personal history, knowledge and experiences into the learning encounter and tried to promote learning that was emergent rather than ‘given’ or ‘discoverable’ (Vygotsky & Cole, 1978).

Applying theory to design

The above goals were achieved in the design of the app by using a scenario-based approach (Clark, 2013). The app places the learner in a ‘real world’ type environment enabling them to take on the role of an actor responding to realistic challenges. Given the potentially varied knowledge base and experiences of the end users, careful consideration had to be given to the context within which to set the scenarios. A number of options were explored before placing the learner in the role of a team manager attending a monthly peer supervision meeting. At this meeting a newly appointed team manager (Adrian) seeks advice from the meeting around five situations based on the learning aims and objectives of the app. The role of the learner is to help Adrian ensure his team’s uses of social media are consistent with social work ethics and values (see Figure 1).

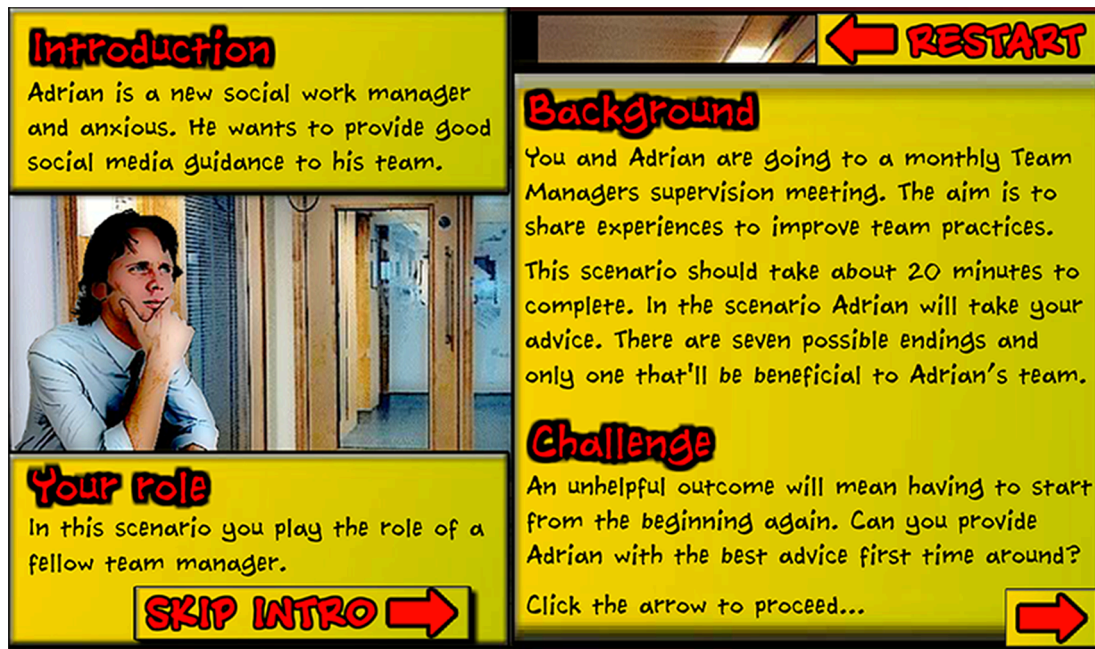


Figure 1 - Using a games-based approach and setting a real world context for learning.

Allen and Sites (2012) highlight that when designing learning activities technology-based designers tend to use judgments to provide immediate feedback to learners on their choices. They suggest that this type of approach cheats learners from engaging in deeper learning. Therefore, rather than using 'judgments', they suggest that learners should be encouraged to consider the potential 'consequences' of their decision-making processes and reflect on the outcomes. An example of how this approach is applied in the SWSMa; in the first case study the learner is asked to advise Adrian about whether he should encourage non-social media-using members of his team to attend a social media training event. Feedback from two virtual colleagues (Figure 2) at the meeting offer a set of competing ethical arguments about why the team members should or should not attend.

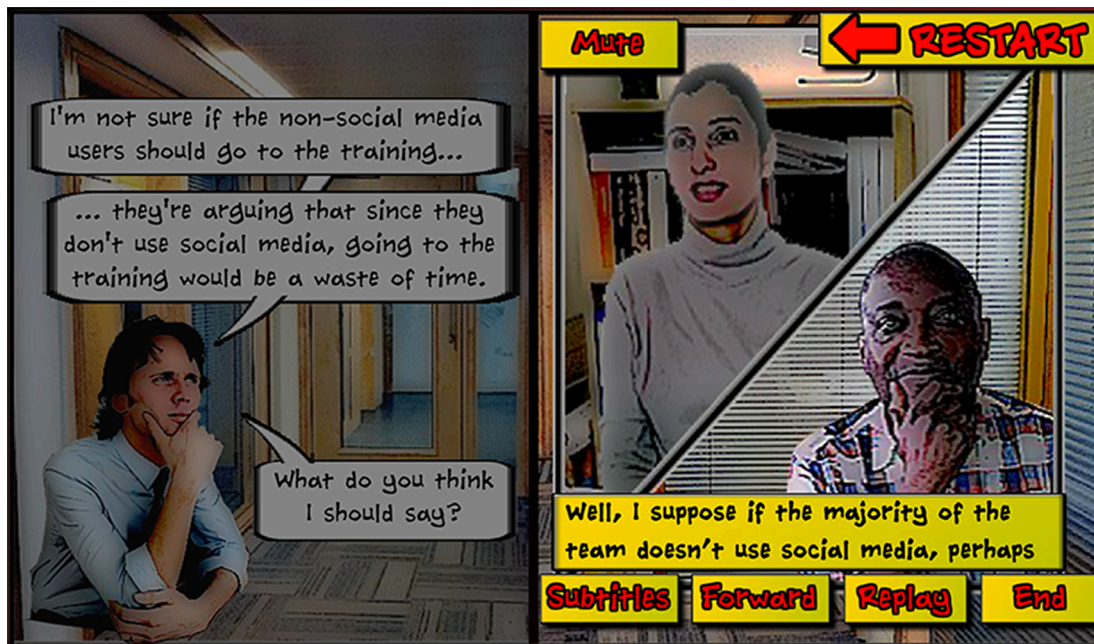


Figure 2 - Audio is used to bring to life the competing ethical arguments offered by Adrian's virtual colleagues.

At this stage the learner has to make decisions based upon the arguments put forward. Depending upon the decision(s) made, the learner is taken through a set of branching scenarios before being presented with either a successful (Figure 3) or less successful outcome. This process aims to encourage learners to reflect on and discuss not only the potential consequences, but also the principles that have guided their decision-making processes.

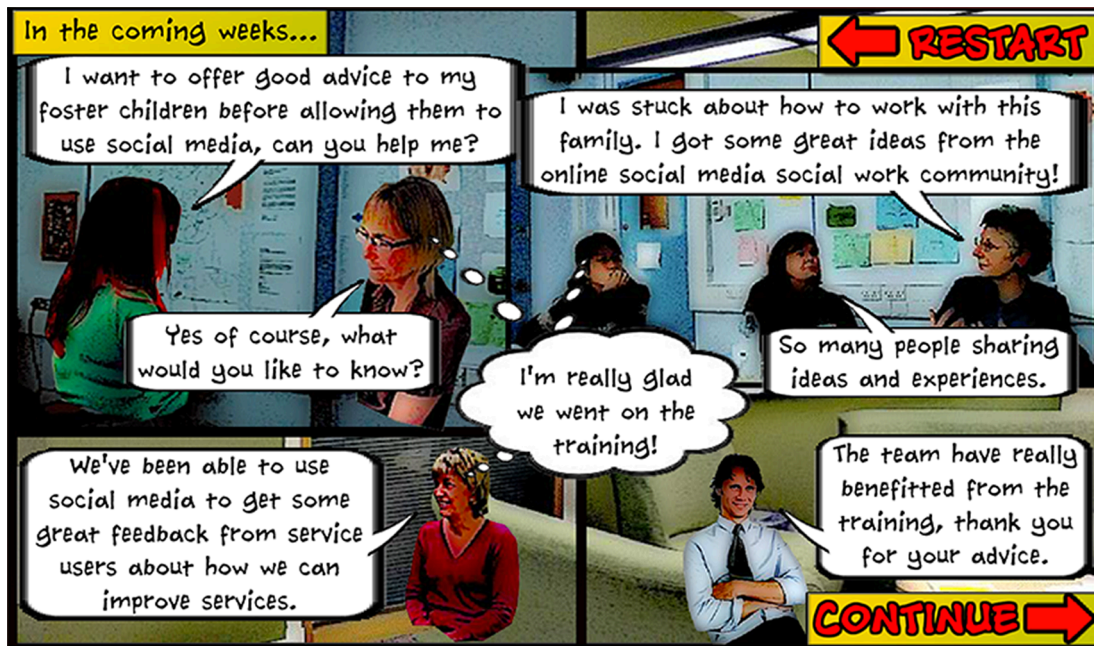


Figure 3 - The outcomes of learners' decision-making processes are used to trigger further discussion and debate.

The context of the SWSMa allows learners to examine the issues inherent in the ethical uses of social media in social work from the different perspectives of the organization, team manager, practitioner, student and service users. To ensure learners successfully navigate the ethical issues presented, they have to engage in activities where they have to assess relevant from irrelevant information through a series of complex arguments before deciding how to proceed.

Mobile related learning design considerations

Although the SWSMa can be used as a standalone learning resource, its design can encourage a blended learning approach. For example, educators can set the app as a homework activity to trigger learning and reflection that can then be explored further in a blend of social situations such as online and/or in class discussions. Ruta, Scioscia, Colucci, Di Sciascio, Di Noia & Pinto (2010) illustrate that Internet-

connected mobile devices are exceptionally good at allowing learners to use in-built communication tools to share learning with peers. To complete the app's five case studies the learners could take between twenty to forty minutes, depending upon their decision-making and the place they undertake the learning. Research on mobile app design (Brossier, 2011; Wagner, 2011) suggests that, given the flexible nature of the platform, the design has to accommodate learning that can take place either during a set time or whilst on public transport, waiting in a queue, during a break at work etc. Therefore the app design had to cater for situations in which users could go through the app in one go, or dip in and out depending upon the opportunities for learning presented.

Technical development process

Developing the skills and knowledge to create an app

The lead author wanted to develop the skills and knowledge required to create an app that would work on both Apple and Android mobile phone and tablet devices. Rather than learning how to use two different software authoring tools (XCode for Apple and Eclipse for Android), using Adobe's Design & Web Premium Creative Suite 6 made it possible to create once and deploy to both platforms. This software suite was chosen primarily for the Flash Professional (FP) and Photoshop (PS) applications. These were the primary tools used to create the SWSMa. The author had some experience of using PS but had to start from scratch learning the FP interface and programming language. To begin with, the author accessed online courses at Lynda.com purchasing a monthly subscription that allowed access to all the courses required to create for the mobile platform. Books were also purchased for deeper learning around the object oriented programming approach adopted by FPs

ActionScript 3.0 programming language (Lott, Schall, & Peters, 2007; Shupe & Rosser, 2011). Skills and familiarity with FP increased through trial and error experimentation as the project developed.

Digital tools

Using the Fellowship funds, an Apple MacBook Air, iPad and Samsung 10inch Tablet were purchased along with developer licenses for the two platforms. The lead author's personal mobile phone and those of the test group were used to trial the app in the UK at various stages of the development process. A mobile phone was used to capture images and PS to create a consistent look for the app interface. The interface continued to be adapted based on usability feedback. Audio was captured using a Samsung CO1U USB microphone and edited using Apple's SoundTrack Pro software. FP was used to tie the different graphical and audio digital assets together and generate the apps interactivity.

Iterative design and testing process

Educators, students and practitioners provided feedback about the SWSMa from the perspectives of its use as a learning and teaching tool. After trialing a paper-based version of the app, work began on a digital prototype. The lead author observed and recorded different test groups' use of the app with variously sized mobile devices to assess the usability of the interface and effectiveness of the learning design. Test group members were encouraged to verbally articulate their decision-making processes and views about the various elements. This process provided rich user feedback and influenced a number of iterative design changes, which included for example adopting a games-type feature challenging the learner to get through the app

without having to restart. This addition meant having to learn about the theory and practice of computer-based level design for educational games (Whitton & Moseley, 2012). Feedback suggested that the games feature and audio interactions introduced different components that positively impacted on the learning experience, compared to the initial paper-based versions. Observing the test group use the app and discussing their interactions also enabled changes to elements such as the images used to set the context, audio length, button sizes and labels etc. The digital development phase took approximately four-months, and during this time the app was modified thirty-one times. At the end of this period the app was ready for global release via Apple's iTunes and the Google Play Stores.

Evaluation

Project background and learning designs

The original plan was to mix students from the three international cohorts and place them in closed Facebook groups using the SWSMa to trigger online discussion and debate. Unfortunately, the fifty-four Australian students were timetabled to study this topic earlier in the year; consequently it was not possible to achieve this goal.

Therefore, in August 2013 over a three-week period the Australian students engaged in a blended learning design whilst on a field education placement four-days and engaged in University learning one-day a week. In a face-to-face session at the beginning of teaching students received instructions about how to download the SWSMa. Over the next two weeks they engaged in reading and online lectures and discussions related to the uses of technology and social media in social work. In week three, students met in a face-to-face session with their tutor to consolidate the learning they had undertaken over the previous weeks.

From October to November in 2013, fifty-two UK students and twenty-eight Canadian students were placed into ten internationally mixed closed Facebook groups. Both cohorts were introduced to the learning design in face-to-face sessions at the beginning of their respective learning units. Students were provided with download instructions for the SWSMa, guidance about how to join their closed Facebook groups and milestones in relation to their collective learning tasks were provided. The UK and Canadian tutors each took responsibility for guiding the online learning of five student groups. On the final day of teaching both UK and Canadian students in their respective institutions provided a 30-minute group-based presentation to peers outlining the collective learning they had achieved.

Data collection

Oliver and Conole (1998) highlight that evaluations often tend to be focused on results rather than on exploration of learning experiences, particularly in cases where skills and knowledge development are difficult to measure quantitatively. Hughes (2003) argues studies that focus only on attitudinal surveys of students tend to gain inadequate understanding of the complex nature of the learning experience itself. A major obstacle in understanding these types of learning experiences has been the failure to measure the impact technology can have on the process of education. In order to investigate the SWSMa's impact, the two issues in the evaluation this article seeks to address are, first, what impact did using the app have on student confidence in meeting its learning aims; and second, what themes arose from students' experiences of using the SWSMa? Prior to undertaking the research ethical approval was obtained from the three institutions. Data were gathered at two stages; students

from all three cohorts were recruited to complete questionnaires at the beginning and end of teaching enabling the authors to examine the impact of specific aspects of their learning experiences. Whilst both questionnaires gathered quantitative data to explore impact in relation to confidence, the second questionnaire had additional qualitative questions asking students to write down their experiences of the different elements of the learning designs. These were collated, shared and analysed with key themes being drawn out by coding. The authors are working on additional articles exploring the different aspects of these two learning designs, but this article outlines lessons learned about the impact students' felt the SWSMa had on their learning.

Findings and analysis

A statistical breakdown of ownership and access to mobile devices of the three cohorts in this study is outlined in Table 1. Students who did not have a mobile device were encouraged from the outset to work with peers who did.

Table 1 - Statistical breakdown of smartphone ownership amongst students

Question	Country	Yes	No
Do you own or have access to a smartphone or tablet computer?	Australia	n= 49 (91% of respondents)	n = 5 (9% of respondents)
	Canada	n = 22 (96% of respondents)	n = 1 (4% of respondents)
	UK	n = 48 (94% of respondents)	n = 3 (6% of respondents)

In the UK in 2014 almost 7 out of 10 adults (68%) had used mobile devices to access

the Internet (ONS, 2014). In Australia in 2012, 49% of adults had access to smartphones (ACMA, 2013). Statistics Canada (2013) illustrate that as of 2012, 60% of their residents had used mobile devices to access the Internet. The figures in Table 1 suggest that students from all three countries had a higher level of access to mobile devices compared to their respective adult populations. These results may suggest that mobile is a readily accessible platform on which to develop learning activities, however some unforeseen issues arose. The majority of UK and Canadian students had no problem downloading the SWSMa and using it out of class. However, a high percentage of Australian students (79%, n=42) only used the app in class on the final day of teaching. The main reasons appeared to be that Australian students gave priority to submitting an assignment due during this period and many were unfamiliar with downloading apps and therefore had to create accounts with the iTunes or Google Play Stores. In introducing mobile apps into a learning design, educators should not assume that students are familiar with the process of downloading apps onto their devices.

Using a five-point Likert scale ranging from ‘cannot do at all’ to ‘can do very well’ (question 1) and ‘not at all confident’ to ‘very confident’ (questions 2 to 5), students were asked to respond to five questions specifically in relation to their experiences of using the SWSM app. (Table 2)

Table 2 - Pre and post app use confidence scores

Question	Country	Pre-app mean	Post-app mean
1. Can you outline how social work values and ethics should govern your behaviour when using social media sites?	Australia	3.61 (n= 57)	4 (n= 54)
	Canada	3.3 (n= 23)	3.96 (n= 27)
	UK	3.2 (n= 32)	4.2 (n= 32)
2. How confident are you that you can use social media appropriately for continuing professional development?	Australia	3.74	4.24
	Canada	3.07	4.4
	UK	3.6	4.5
3. How confident are you that you can advise social work colleagues about what is and is not appropriate to say or post online?	Australia	4.16	4.06
	Canada	3.65	4.28
	UK	3.78	4.4
4. How confident are you that you can explain to social work colleagues the boundary issues involved in using social media with service users?	Australia	3.74	4.11
	Canada	3.43	4
	UK	3.75	4.3
5. How confident are you that you can outline how social media could be used to gain service user input to improve social work services?	Australia	3.33	4.02
	Canada	3.08	4.12
	UK	3	4

From a cross-national perspective the results from these three cohorts indicated relatively high pre-teaching confidence scores. In all but one category (Q3, Australia) students indicated that using the SWSMa did increase their confidence in potentially being able to deal in practice with the topics explored by the app.

Whilst the above feedback provides a wealth of information, quantitative data by its nature is quite limited in helping understand why students chose to respond in the way they did (Cohen, Manion, & Morrison, 2000). To gain meaningful lessons, themes were drawn from the written feedback provided by all three cohorts based on the following questions.

Has using the app made you think differently about your use of social media?

Of the 85 students who responded to this question, 24 (28%) felt it did not build on their learning with the main themes as they felt they were already familiar with the topics explored by the app. The majority of respondents (n=61, 72%) replied that the app did make them think differently. The emerging themes suggest that students started to think more about issues such as online boundaries in relation to the amount of their personal data openly accessible (n=26, 31%), how to maintain professional profiles and deal with 'friend' requests from service users to their closed personal social networks (n=20, 24%), the ethical issues of exploring open service user profiles and generally the ethical challenges that the social media platforms presented for social work (n=31, 36%). Unfortunately, very few students (n=6, 7%) stated that their experiences had helped them consider how they could use social media networks to develop professional communities of practice or help service users use social media to improve service delivery (n=4, 5%) or address issues of digital exclusion (n=2, 2%).

The main lessons seem to have been very personal ones based around ensuring that their online behaviours were ethical and that they maintained online boundaries and personal privacy. This may well be a flaw in the learning design of the app and is one area that has been flagged for further research and development.

Can you provide some examples of how the app aided/hindered your learning?

There were 80 responses to this question with approximately 34% (n=27) of students raising issues they felt hindered their learning. The main themes centred on the cartoon design with statements such as the images were “juvenile” or “corny”. A number of students (n=6, 7%) did not like the fact that they had to start from the beginning if their responses had a negative outcome for Adrian and his team. Some students (n=4, 5%) felt there should have been an option to make the text bigger for those using the app in groups. Altogether 66% (n=53) of responses were positive, with 42% (n=34) explicitly stating that the app was well designed and attractive and 13% (n=10) feeling that the addition of audio and subtitles made the learning resource more engaging. Also, 19% (n=15) clearly stated that they felt the “life like” scenarios helped them safely try out and reflect on how they would deal with similar situations in practice, with 18% (n=14) explicitly stating that the interactive feedback made them reflect further on the consequences that could arise from their decision-making. Although educators in Australia and Canada did warn students that actors’ accents on the app were British, this did not emerge as something that hindered their learning.

Where and how did you primarily use the app?

This question had 89 responses with 37% (n=33) of students stating they had used the app only in-class. These students were all from the Australian cohort. Approximately

16% (n=14) of all students explicitly stated that they had used the app at home, explaining that they wanted to find a quiet place to concentrate on the learning materials. The remainder indicated that they accessed the app in various locations ranging from home, on public transport (n=3, 3%), during breaks (n=9, 10%), in the library (n=6, 7%) , at university with peers (n=20, 22%), at work (n=4, 4%) where discussions took place about how it could be used with service users and waiting in queues (n=3, 3%). A small number (n=7, 8%) also indicated that they used multiple devices such as iPhones and iPads with and without headphones. The majority (n=32, 35%) of these respondents indicated that they used the app in multiple rather than single locations. As well as this range of settings, another theme that emerged was that it was not unusual for students working individually and with others to discuss the topics explored by the app out of the classroom setting.

Summary

This article sets the context for, and then surfaces a number of lessons about how mobile apps can be developed and used in social work education. The tools and processes educators can use to create mobile apps are clearly outlined, demonstrating that academics can work at the intersection of technology, learning design and subject knowledge to create apps that have at their core, social work as opposed to ICT-based principles of learning. The steps required to create mobile apps using scenario-based learning approaches are illustrated, along with an international evaluation of students' experiences. The evaluation demonstrates that students were able to successfully learn about a complex set of ethical issues around social media use, through the processes of discussion and debate triggered by the life-like scenarios presented in the app. The article also introduces new learning, highlighting how creating interactive case

scenarios for mobile devices differ in a number of ways compared to previous digital platforms. Some lessons include, how mobile devices no longer tie learners down to specific locations, meaning educational mobile app design has to take into account learning that can take place at any time and place. Amongst other lessons, the research also illustrates how, although access to mobile devices can be quite high amongst social work students, and app's can be easily delivered to devices 'over the air' using international mobile networks, educators must not assume that all learners are familiar with how to access and install apps onto their devices.

Along with these lessons, this article argues that with a new generation of students and workers potentially able to work at the intersection of ICTs and social work, it is important that the discipline encourages discussion and debate about how this talent can be nurtured. It is also important to share lessons that explore how social work academics are currently operating in this space to illustrate how the principles of social work can remain at the fore to ensure the discipline continues to work in the best interests of students, service users and their communities.

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